

THAT WHICH IS CLAIMED IS:

1. A method for guiding the selection of a therapeutic treatment regimen for a patient with a known disease or medical condition, said method comprising:

(a) providing patient information to a computing device comprising:

a first knowledge base comprising a plurality of different therapeutic treatment regimens for said disease or medical condition;

a second knowledge base comprising a plurality of expert rules for evaluating and selecting a therapeutic treatment regimen for said disease or medical condition;

a third knowledge base comprising advisory information useful for the treatment of a patient with different constituents of said different therapeutic treatment regimens; and

(b) generating in said computing device a listing of available therapeutic treatment regimens for said patient; and

(c) generating in said computing device advisory information for one or more therapeutic treatment regimens in said listing based on said patient information and said expert rules.

2. A method according to claim 1, further

comprising the steps of:

(d) entering a user-defined therapeutic treatment regimen for said disease or medical condition  
5 that is not included in said first knowledge base;

(e) generating in said computing device advisory information for said user-defined combination therapeutic treatment regimen.

3. A method according to claim 1, further comprising the steps of:

(f) entering a non-recommended therapeutic treatment regimen for said disease or medical condition  
5 that is included in said first knowledge base but not recommended from said listing; and

(g) generating in said computing device advisory information for said non-recommended therapeutic treatment regimen, said advisory  
10 information including at least one reason for non-recommendation of said therapeutic treatment regimen.

4. A method according to claim 1, said patient information comprising gender, age, weight, CD4 information, viral load information, HIV genotype and phenotype information, hemoglobin information,  
5 neuropathy information, neutrophil information, pancreatitis, hepatic function, renal function, drug allergy and intolerance information, and information for drug treatments for other conditions.

5. A method according to claim 1, said patient information including prior therapeutic treatment regimen information.

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6. A method according to claim 1, wherein said listing of available therapeutic treatment regimens for said patient comprises a ranked listing of available therapeutic treatment regimens for said patient.

6<sup>1</sup>. A method according to claim 1, wherein said patient information includes prior patient information stored in said computing device.

7<sup>1</sup>. A method according to claim 1, said advisory information including:  
warnings to take the patient off a contraindicated drug before initiating a corresponding therapeutic treatment regimen; and  
information clinically useful to implement a corresponding therapeutic treatment regimen.

8<sup>1</sup>. A method according to claim 1, wherein said computing device comprises a fourth knowledge base comprising patient therapeutic treatment regimen history, said advisory information including previous therapeutic treatment regimen information extracted from said fourth knowledge base.

9<sup>1</sup>. A method according to claim 7<sup>1</sup>, wherein said known disease or medical condition is HIV-1 infection, said therapeutic treatment regimen includes antiretroviral drugs, and said therapeutic treatment regimen includes contraindicated or potentially adversely interacting non-antiretroviral drugs.

778 10<sup>11</sup> 11. A method according to claim 8<sup>7</sup>, wherein said therapeutic treatment regimen includes a protease inhibitor, and said contraindicated drug is terfenadine.

778 11<sup>12</sup> 12. A method according to claim 8<sup>7</sup>, wherein said therapeutic treatment regimen includes indinavir and said contraindicated drug is cisapride.

778 12<sup>13</sup> 13. A method according to claim 1, wherein said known disease or medical condition is one where multiple prophylactic or therapeutic treatment regimens are available to be used singly or in combination in the treatment of said disease.

778 13<sup>14</sup> 14. A method according to claim 1, wherein said known disease or medical condition is a cardiovascular disease.

778 14<sup>15</sup> 15. A method according to claim 1, wherein said known disease or medical condition is a pulmonary disease.

778 15<sup>16</sup> 16. A method according to claim 1, wherein said known disease or medical condition is a neurologic disease.

778 16<sup>17</sup> 17. A method according to claim 1, wherein said known disease or medical condition is cancer.

778 17<sup>18</sup> 18. A method according to claim 1, wherein said known disease or medical condition is a urinary

tract infection.

27 19<sup>19</sup> 19. A method according to claim 1, wherein said known disease or medical condition is hepatitis.

27 19<sup>20</sup> 20. A method according to claim 1, wherein said known disease or medical condition is HIV-1 infection.

Sub A3 21. A method according to claim 1, wherein said knowledge base comprises a plurality of different combination therapeutic treatment regimens.

22 22<sup>22</sup> 22. A method according to claim 1, wherein drug dosage information is recommended and adjusted if necessary depending upon said patient information.

22 23<sup>23</sup> 23. A method according to claim 1, further comprising the step of:

(d) accessing, via said computing device, information for one or more therapeutic treatment regimens from a drug reference source.

Sub A3 24. A system for guiding the selection of a therapeutic treatment regimen for a patient with a known disease or medical condition, said system comprising:

(a) a computing device comprising:

a first knowledge base comprising a plurality of different therapeutic treatment regimens for said disease or medical condition;

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a second knowledge base comprising a plurality of expert rules for selecting a therapeutic treatment regimen for said disease or medical condition;

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a third knowledge base comprising advisory information useful for the treatment of a patient with different constituents of said different therapeutic treatment regimens; and

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(b) means for providing patient information to said computing device;

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(c) means for generating in said computing device a listing of therapeutic treatment regimens for said patient; and

(d) means for generating in said computing device advisory information for one or more therapeutic treatment regimens in said listing based on said patient information and said expert rules.

<sup>24</sup>~~25~~. A system according to claim <sup>23</sup>~~24~~, further comprising:

5 (e) means for entering a user-defined therapeutic treatment regimen for said disease or medical condition that is not generated or displayed via said first knowledge base;

(f) means for generating in said computing device advisory information for said user-defined combination therapeutic treatment regimen.

26. A system according to claim 24, further comprising:

(f) means for entering a non-recommended

5 therapeutic treatment regimen for said disease or  
medical condition that is included in said first  
knowledge base but not recommended from said listing;  
and

10 (g) means for generating in said computing  
device advisory information for said non-recommended  
therapeutic treatment regimen, said advisory  
information including at least one reason for non-  
recommendation of said therapeutic treatment regimen.

5 27. A system according to claim 24, said  
patient information comprising gender, age, weight, CD4  
information, viral load information, HIV genotype and  
phenotype information, hemoglobin information,  
neuropathy information, neutrophil information,  
pancreatitis, hepatic function, renal function, drug  
allergy and intolerance information, and information  
for drug treatments for other conditions.

27<sup>28</sup>. A system according to claim 23<sup>24</sup>, said  
patient information including prior therapeutic  
treatment regimen information.

5 29. A system according to claim 24, wherein  
said listing of available therapeutic treatment  
regimens for said patient comprises a ranked listing of  
available therapeutic treatment regimens for said  
patient.

28<sup>29</sup>. A system according to claim 23<sup>24</sup>, wherein  
said patient information includes prior patient  
information stored in said computing device.

29<sup>23</sup>/<sub>31</sub>. A system according to claim <sup>23</sup>/<sub>24</sub>, said  
advisory information including:

warnings to take the patient off a  
contraindicated drug before initiating a corresponding  
therapeutic treatment regimen; and

information clinically useful to implement a  
corresponding therapeutic treatment regimen.

30<sup>23</sup>/<sub>32</sub>. A system according to claim <sup>23</sup>/<sub>24</sub>, wherein  
said computing device comprises a fourth knowledge base  
comprising patient therapeutic treatment regimen  
history, said advisory information including previous  
therapeutic treatment regimen information extracted  
from said fourth knowledge base.

31<sup>29</sup>/<sub>33</sub>. A system according to claim <sup>29</sup>/<sub>31</sub>, wherein  
said known disease or medical condition is HIV-1  
infection, said therapeutic treatment regimen includes  
antiretroviral drugs, and said therapeutic treatment  
regimen includes contraindicated or potentially  
adversely interacting non-antiretroviral drugs.

32<sup>29</sup>/<sub>34</sub>. A system according to claim <sup>29</sup>/<sub>31</sub>, wherein  
said therapeutic treatment regimen includes a protease  
inhibitor, and said contraindicated drug is  
terfenadine.

33<sup>29</sup>/<sub>35</sub>. A system according to claim <sup>29</sup>/<sub>31</sub>, wherein  
said therapeutic treatment regimen includes indinavir  
and said contraindicated drug is cisapride.

34<sup>23</sup>/<sub>36</sub>. A system according to claim <sup>23</sup>/<sub>24</sub>, wherein



5 said known disease or medical condition is one where multiple prophylactic therapeutic treatment regimens are available to be used singly or in combination in the treatment of said disease or medical condition.

27A <sup>35</sup>~~37~~. A system according to claim <sup>23</sup>~~24~~, wherein said known disease or medical condition is a cardiovascular disease.

27A <sup>36</sup>~~38~~. A system according to claim <sup>23</sup>~~24~~, wherein said known disease or medical condition is a pulmonary disease.

27A <sup>37</sup>~~39~~. A system according to claim <sup>23</sup>~~24~~, wherein said known disease or medical condition is a neurologic disease.

27A <sup>38</sup>~~40~~. A system according to claim <sup>23</sup>~~24~~, wherein said known disease or medical condition is cancer.

27A <sup>39</sup>~~41~~. A system according to claim <sup>23</sup>~~24~~, wherein said known disease or medical condition is a urinary tract infection.

27A <sup>40</sup>~~42~~. A system according to claim <sup>23</sup>~~24~~, wherein said known disease or medical condition is hepatitis.

27A <sup>41</sup>~~43~~. A system according to claim <sup>23</sup>~~24~~, wherein said known disease or medical condition is HIV-1 infection.

44. A system according to claim 24, wherein

said knowledge base comprises a plurality of different combination therapeutic treatment regimens.

27 43 45. A system according to claim 23 24, wherein drug dosage information is recommended and adjusted if necessary depending upon said patient information.

27 44 46. A system according to claim 23 24, further comprising:

(e) means for accessing, via said computing device, information for one or more therapeutic treatment regimens from a standard drug reference source.

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5 47. A computer program product for guiding the selection of a therapeutic treatment regimen for a patient with a known disease or medical condition, said computer program product comprising a computer usable storage medium having computer readable program code means embodied in the medium, the computer readable program code means comprising:

10 (a) computer readable program code means for generating a computing device comprising:

15 a first knowledge base comprising a plurality of different therapeutic treatment regimens for said disease or medical condition;

a second knowledge base comprising a plurality of expert rules for selecting a therapeutic treatment regimen for said disease or medical condition;

a third knowledge base comprising

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advisory information useful for the treatment of a patient with different constituents of said different therapeutic treatment regimens; and

(b) computer readable program code means for providing patient information to said computing device;

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(c) computer readable program code means for generating in said computing device a listing of available therapeutic treatment regimens for said patient; and

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(d) computer readable program code means for generating in said computing device advisory information for one or more therapeutic treatment regimens in said listing based on said patient information and said expert rules.

48. A computer program product according to claim 47, further comprising:

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(e) computer readable program code means for entering a user-defined therapeutic treatment regimen for said disease or medical condition that is not generated or displayed via said first knowledge base;

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(f) computer readable program code means for generating in said computing device advisory information for said user-defined combination therapeutic treatment regimen.

49. A computer program product according to claim 48, further comprising:

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(g) computer readable program code means for entering a non-recommended therapeutic treatment regimen for said disease or medical condition that is

included in said first knowledge base but not recommended from said listing; and

10 (h) computer readable program code means for generating in said computing device advisory information for said non-recommended therapeutic treatment regimen, said advisory information including at least one reason for non-recommendation of said therapeutic treatment regimen.

77 48 50. A computer program product according to claim 45, said patient information comprising gender, age, weight, CD4 information, viral load information, HIV genotype and phenotype information, hemoglobin information, neuropathy information, neutrophil information, pancreatitis, hepatic function, renal function, drug allergy and intolerance information, ~~and information for drug treatments for other conditions~~

5 49 51. A computer program product according to claim 45, said patient information including prior therapeutic treatment regimen information.

77 52. A computer program product according to claim 47, wherein said patient information includes prior patient information stored in said computing device.

77 51 53. A computer program product according to claim 45, said advisory information including: warnings to take the patient off a contraindicated drug before initiating a corresponding therapeutic treatment regimen; and

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information clinically useful to implement a corresponding therapeutic treatment regimen.

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54. A computer program product according to claim 47 wherein said computing device comprises a fourth knowledge base comprising patient therapeutic treatment regimen history, said advisory information including previous therapeutic treatment regimen information extracted from said fourth knowledge base.

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55. A computer program product according to claim ~~53~~<sup>51</sup>, wherein said known disease or medical condition is HIV-1 infection, said therapeutic treatment regimen includes antiretroviral drugs, and said therapeutic treatment regimen includes contraindicated or potentially adversely interacting non-antiretroviral drugs.

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56. A computer program product according to claim ~~53~~<sup>51</sup>, wherein said therapeutic treatment regimen includes a protease inhibitor, and said contraindicated drug is terfenadine.

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57. A computer program product according to claim ~~53~~<sup>51</sup>, wherein said therapeutic treatment regimen includes indinavir and said contraindicated drug is cisapride.

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58. A computer program product according to claim ~~47~~<sup>45</sup>, wherein said known disease or medical condition is one where multiple prophylactic therapeutic treatment regimens are available to be used

5 singly or in combination in the treatment of said disease or medical condition.

77 57  
45 59. A computer program product according to claim 47, wherein said known disease or medical condition is a cardiovascular disease.

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45 60. A computer program product according to claim 47, wherein said known disease or medical condition is a pulmonary disease.

77 59  
45 61. A computer program product according to claim 47, wherein said known disease or medical condition is a neurologic disease.

77 60  
45 62. A computer program product according to claim 47, wherein said known disease or medical condition is cancer.

77 61  
45 63. A computer program product according to claim 47, wherein said known disease or medical condition is a urinary tract infection.

77 62  
45 64. A computer program product according to claim 47, wherein said known disease or medical condition is hepatitis.

77 63  
45 65. A computer program product according to claim 47, wherein said known disease or medical condition is HIV-1 infection.

66. A computer program product according to

claim 47, wherein said knowledge base comprises a plurality of different combination therapeutic treatment regimens.

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67. A computer program product according to claim 47, wherein drug dosage information is recommended and adjusted if necessary depending upon said patient information.

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68. A computer program product according to claim 47, further comprising:

(e) computer readable program code means for accessing, via said computing device, information for one or more therapeutic treatment regimens from a standard drug reference source.

69. A computer program product according to claim 47, wherein said listing of available therapeutic treatment regimens for said patient is a ranked listing of available therapeutic treatment regimens for said patient.